REMARKS

Reconsideration of this application is respectfully requested.

Claims 1-4, 7-12, and 15-23 are pending in the application with claims 1, 4, 8, and 15-23 being the independent claims. New independent claims 22 and 23 have been added. Claims 5, 6, 13, and 14 are canceled without prejudice or disclaimer.

The Office Action on page 5, in section 2, indicates that claims 8-12, 15, and 21 are allowed. Applicants thank the Examiner for such allowance.

The present invention relates to a network interface apparatus for connecting a communication terminal to an Internet Protocol (IP) network. In an exemplary embodiment of the invention illustrated in Figure 3, for example, a network interface apparatus 10 may include an input circuit 10c, a transmitter 104d, an interface circuit 10a, a packetizer 102d, and a control circuit 10e. In an exemplary embodiment of the invention, input circuit 10c may receive data to be transferred from the communication terminal 20. See, e.g., Specification, page 10, lines 23-30. Transmitter 104d may transmit a packet to the IP network 30. See, e.g., Specification, page 11, lines 25-30. Interface circuit 10a may interface the transmitter 104d with the IP network 30 and may determine a delay in transmission between the IP network 30 and the network interface apparatus 10 to produce delay information 12f. See, e.g., Specification, page 8, line 31 to page 9, line 27. Packetizer circuit 102d may packetize the received data to be transferred into the packet in accordance with an Internet Facsimile Protocol (IFP). See, e.g., Specification, page 12, lines 11-15. Transmitted 104d may then determine which model for facsimile transmission the received data corresponds to, and allot a header associated with the determined model to the packet. See, e.g., Specification, page 11, lines 12-30. Control circuit 10e operates in response to the delay information for controlling the packetizer circuit to adjust the size of the packet on a basis of the delay information 12f. See, e.g., Specification, page 12, lines 3-6.

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The Office Action, on pages 2-5, in section 1, rejects claims 1-7, 13-14, 16-17, and 19-20 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,298,057 to Guy et al. ("the Guy patent") in view of U.S. Patent No. 6,370,163 to Shaffer et al. (the "Shaffer patent").

The Office Action asserts that the Guy patent teaches a network interface apparatus comprising an input circuit for receiving data to be transferred from a communication terminal, a transmitter for transmitting a packet to the IP network, an interface circuit for interfacing the transmitter with the IP network, and an input circuit for capturing an image of a document and formatting data to be transferred representing the image. The Office Action acknowledges that the Guy patent does not teach a control circuit operative to use delay information for controlling the packetizer to adjust the packet size. The Office Action asserts, however, that the Shaffer patent cures this deficiency by teaching an apparatus to determine a delay in transmission between the IP network and the apparatus and a control circuit operative in response to the delay information for controlling the packetizer/transfer rate. The Office Action further asserts that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the network interface apparatus of the Guy patent by the packet adjustment controller based on delay apparatus of the Shaffer patent for the purpose of minimizing end-to-end delays caused by network traffic and network topology between two IP devices. Applicants respectfully traverse this rejection because the cited combination of the Guy patent and the Shaffer patent does not teach or suggest the features of the claimed invention.

Amended claim 1 recites a packetizer circuit for packetizing received data into the packet in accordance with an Internet Facsimile Protocol (IFP) and a transmitter determining which of models for facsimile the received data are of and allotting a header with the determined model to the packet. Referring to Figure 3, for example, a receiver 10b comprises a TCP/IP receiver and an IFP packet analyzer 102b. Either the IFP/TCP/IP packet hierarchy model indicating the high-level IFP/TCP/IP packet structure or the flat model is applied to the TCP/IP receiver 100b. The TCP/IP receiver 100b obtains an IFP packet area according to these models. When the model is the hierarchy model, the TCP payload in the IP payload corresponds to an IP packet. When the model is the flat model, an IFP packet is directly below the TCP header. The obtained IFP packet 12b is

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sent to the IFP packet analyzer 102b. Specification, page 9, line 29 to page 10, line 4. In an exemplary embodiment of the invention, the TCP/IP transmitter 104d incorporates the IP header and the TCP header into the IFP packet 12g according to the model and outputs the TCP packet 12h to the network interface 10a. The network interface 10a interfaces the physical/electrical characteristics and then outputs the packet 12h to the IP network. Specification, page 11, lines 25-30.

The Guy patent does not teach or suggest the recited packetizer or transmitter. Instead, referring to Figure 4, the Guy patent teaches a network packetizer for creating a packet that includes one or more frames, adding a header that includes the network address of a destination CSU, and receiving a packet and removing the header. Such a packetizer does not teach a packetizer that packetizes received data into the packet in accordance with an Internet Facsimile Protocol (IFP). The Guy patent also teaches a network interface card (NIC) 218 for converting signals from a file server into a format used by a Local Area Network (LAN). Such a transmitter does not determine which model for facsimile transmission the received data corresponds to and allot a header with the determined model to the packet. Therefore, the Guy patent does not teach or suggest the recited features of claim 1.

The Shaffer patent does not cure this deficiency. Instead, the Shaffer patent teaches a communication device to transmit data over a Local Area Network (LAN) having routers. See, the Shaffer patent, Figure 2. Such routers do not packetizes received data into the packet in accordance with an IFP or not determine which model for facsimile transmission the received data corresponds to.

Further, the Shaffer patent does not teach a control circuit that is operative in response to delay information. As recited in claim 1, delay information is produced from a delay in transmission between the IP network and the network interface apparatus. The Office Action aligns the recited control circuit with a control program 12 in Figure 1 of the Shaffer patent. Referring to Figure 1 of the Shaffer patent, the control program 12 in an IP telephone 10 is configured to process end-to-end transmission delay data to determine permissible packet length for transmission of voice

information. See, the Shaffer patent, col. 5, lines 39-42. Such a control program is not a control circuit that is operative in response to the recited delay information. Further, the control program 12 of the Shaffer patent is not embodied in a network interface apparatus, but is instead in an IP telephone 10. Accordingly, the Shaffer patent does not teach the recited packetizer, transmitter, or control circuit.

In view of the above, Applicant submits that the cited combination of the Guy patent and the Shaffer patent does not teach or suggest the recited features of claim 1. Accordingly, claim 1 is allowable over the combination of the Guy patent and the Shaffer patent.

Claims 2 and 3 depend from claim 1 and are allowable as being dependent from an allowable claim.

Claim 4 contains similar features as claim 1 and is allowable over the combination of the Guy patent and the Shaffer patent for similar reasons as discussed above with respect to claim 1.

Claims 5 and 6 have been canceled, thus rendering the rejection moot with respect to claims 5 and 6.

Claim 7 depends from claim 4 and is allowable as being dependent from an allowable claim.

The remaining independent claims 16, 17, 19, 20, 22, and 23 contain similar features as claim 1 and are allowable over the combination of the Guy patent and the Shaffer patent for similar reasons as discussed above with respect to claim 1.

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In view of the above amendment, applicant believes the pending application is in condition for allowance. Should the Examiner have any questions regarding this matter, the Examiner is invited to contact the undersigned at the number listed below.

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Respectfully submitted,

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